Grain Price OUTLOOK

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SOYBEANS: LARGE U.S. CROP, WHAT ABOUT SOUTH AMERICA?

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Summary

USDA reports provided two fundamental surprises for the market over the past three weeks. First, the September *Grain Stocks* report showed September 1, 2005 inventories of soybeans of 256 million bushels, about 35 million bushels less than expected. Even though the estimate of the 2004 crop was reduced, the current estimate of 3.124 billion bushels still seems too high. Second the October *Crop Production* report reduced the estimate of 2005 planted and harvested acreage by about 900,000 acres. The yield forecast was increased by 2 bushels, to 41.6 bushels per acre, about as expected. However, the resulting production forecast of 2.967 billion bushels was about 40 million less than expected. Still, supplies for the 2005-06 marketing year appear ample, particularly if the 2006 South American crop is near the projected level of 3.97 billion bushels. That projection is 425 million larger than the 2005 crop that was adversely impacted by drought in southern Brazil.

November 2005 soybean futures declined nearly $2.00 from the peak in late June to the low in late September and then recovered about $.40 following the USDA reports. Basis levels remain extremely weak, but cash prices rebounded about $.30 in the second week of October. The seasonal low in the soybean market may have occurred, depending on the size of the November production forecast, but a significant rally is not anticipated unless the South American crop encounters difficulty. Current cost/price relationships point to an increase in U.S. soybean acreage in 2006. A marketing year average U.S. farm price near $5.60 is suggested by the current projection of the year endings stocks-to-use ratio.

Soybean Supplies Remain Record Large

The USDA's estimate of September 1, 2005 soybean stocks of 256 million bushels was surprisingly small, about 40 million less than projected in early September, but was the largest in 5 years (Table 1). The small estimate resulted in a 17 million bushels reduction in the estimated size of the 2004 crop, but that estimate of 3.124 billion bushels still appears to be too large. Seed, feed, and residual use of soybeans during the 2004-05 marketing year totaled about 187 million bushels, 15 to 25 million more than is typically expected. Large residual use, 107 million bushels, is evidence that the 2004 crop was smaller than estimated. The same scenario was observed in 1998-909, but he crop estimate was not revised that year (see Table 1).

The USDA's October *Crop Production* report forecast the 2005 U.S. soybean crop at 2.967 billion bushels, second in size to the record 2004 crop (Table 2). The forecast was 111 million bushels larger than the September forecast and 176 million larger than the August 2005 forecast. Based on Farm Service Agency (FSA) data on certified planted acreage, the USDA lowered the estimate of planted acreage of soybeans by

about 900,000 acres, to a 7 year low of 72.2 million acres (Table 3). Prior to 2003, FSA acreage data was typically reflected in the USDA's January *Crop Production* report, but is now routinely reflected in the October report due to earlier access to the data. The planted acreage estimate was reduced in June, September, and October with the current estimate 1.71 million below the report of planting intentions in March (Table 3). The reduction in planted acreage in 2005 was generally distributed across the major producing regions, with southern growing areas showing slightly larger declines as a percentage of total planted acres (Table 4), partially as a result of the threat of asian rust.

Harvested acreage of soybeans is projected at 71.27 million acres, only 930,000 acres less than planted acreage. The magnitude of abandoned acres is near the low end of historic values, contrary to early expectations that adverse weather would result in more than normal abandonment. Still, harvested acreage is at the lowest level in 7 years (Table 3).

The U.S. average soybean yield is projected at 41.6 bushels per acre, 2 bushels above the September forecast and 2.9 bushels above the August forecast (Table 5). The projection is only 0.6 bushels below the record yield of 2004 when growing conditions were considered almost ideal. Average yields in 2005 are expected to exceed the 2004 average in the northern tier of states and in Iowa and Nebraska.

Over the past 20 years, there has been a strong relationship between the percentage of the soybean crop rated good or excellent in the last report of the season and the U.S. average trend-adjusted yield. That relationship is: yield = 29.79 + .194 (percent rated good or excellent) and it has explained 87 percent of the annual variation in the trend adjusted yield. The 2005 season ended with 57 percent of the crop rated good or excellent, suggesting an average yield of 40.8 bushels per acre, only 0.8 bushel (1.9 percent) below the USDA's October forecast. Since 1979, the October soybean yield forecast exceeded the September forecast 13 times. In those 13 years, the November yield forecast exceeded the October forecast 11 times (Table 5).

Based on the October production forecast, the supply of U.S. soybeans for the 2005 marketing year is projected at 3.227 billion bushels, only 15 million less than the supply of a year ago. With the apparent over estimate of the 2004 crop and some chance the 2005 U.S. yield forecast will increase in November, supplies are probably record large this year. A crop forecast of 2.985 billion bushels, reflecting a yield of 41.9 bushels, is used here (Table 6).

Soybean Use to Remain Large

Typically, the most uncertainty regarding the forecasting of annual soybean oil and meal consumption centers around the export market. When supplies are ample and prices are at modest levels, domestic oil consumption increases at roughly the rate of population growth. Similarly, domestic meal consumption grows at the rate of growth in livestock production, mostly driven by domestic human population growth. Exports, while a fairly small percentage of total consumption of U.S. product, demonstrate no trend in use. Exports of U.S. soybean meal have varied from about 5.1 to 7.7 million tons over the last 16 years, with both extremes occurring in the past five years (Table 7). Annual exports of U.S. soybean oil have ranged from 936 million to about 3.1 billion pounds in the same 16 year period (Table 8). For the current year, the USDA forecasts U.S. soybean oil exports at 1.3 billion pounds, just 50 million less then exports of a year ago. While foreign consumption of soybean oil is expected to grow by nearly 8.5 percent and trade is expected to grow by nearly 9.5 percent, the U.S. is expected to garner a smaller share of the world market. The U.S. had only 4.8 percent of the export market in 2003-04 and 6.7 percent in 2004-05. That share is projected at 5.9 percent in 2005-06, as both Argentina and Brazil are expected to

capture a larger percentage of the market.

U.S. soybean meal exports during the current year are projected at 6.55 million tons, down from 7.3 million last year (Table 7). The U.S. has a slightly larger share of the world soybean meal export market, but that share is expected to decline from 14.3 last year to 12.5 percent this year even as total world trade increases by nearly 3 percent. Exports from Argentina and Brazil are expected to grow by 4 percent on the basis of larger crops.

The USDA forecasts domestic soybean meal consumption at 34 million tons, 1.8 percent more than used last year. The rather small increase reflects expectations of only a modest increase in domestic livestock production and increased feeding of dried distillers' grain. Similarly, the USDA projects a trend increase of 2 percent in domestic use of soybean oil to a total of 17.85 billion pounds. The market, however, seems to think that high petroleum prices will result in a more rapid rate of increase in bio-diesel production, resulting in a larger increase in soybean oil consumption. This expectation extends beyond U.S. soybean oil to include increased consumption of vegetable oils world wide. In fact, reports of plans to increase bio-diesel production emerge on a regular basis. The USDA may be understating demand for soybean oil. A projection of domestic use of 17.9 billion pounds is used here.

For now, it appears that the domestic crush of soybeans will continue to be driven by soybean meal consumption. Based on the projected use of 40.55 million tons and an average yield of 47.65 pounds of meal and hull meal per bushel, the domestic crush would be near 1.7 billion bushels. Allowing for imports of 165,000 tons and a small draw down in ending stocks. The crush is projected at 1.695 billion bushels. If 1.695 billion bushels of soybeans are crushed about 19.155 billion pounds of soybean oil will be produced if the average oil yield is near 11.3 pounds per bushel. Based on the projected level of consumption, year ending oil inventories will be very near the level of stocks at the beginning of the year (Table 8).

U.S. soybean exports have been large and generally increasing since 1994-95. Exports were a record 1.103 billion bushels during the 2004-05 marketing year. U.S. exports have benefitted from a rapid increase in world soybean consumption, particularly in China, and by a shortfall in Brazilian production in 2004 and 2005. The increase in Chinese soybean consumption and imports has been huge over the past 7 years. Domestic consumption grew from an estimated 640 million bushels in 1997-98 to 1.475 billion bushels in 2004-05. Consumption during the current year is projected at 1.694 billion bushels. Chinese imports from all sources grew from 110 million bushels in 1997-98 to 835 million bushels in 2004-05 and are projected at 1.01 billion bushels for the current year.

The Brazilian soybean crop was a record 1.91 billion bushels in 2003. Production remained large in 2004-05, but well below potential production due to extensive drought conditions in southern Brazil (Table 9). Argentine production was a record 1.43 billion bushels in 2005. For the 2006 harvest, the USDA projects a decline of about 4 percent in Brazilian soybean acreage, but a rebound to a more normal average yield (Table 10). Soybean area is expected to increase by nearly 6 percent in Argentina, to a record 37.5 million acres (15.2 million hectares). Average yields, then, would result in 2006 production of about 2.2 billion bushels in Brazil and 1.5 billion in Argentina. Production in all of South America, including Paraguay, Bolivia, and Uruguay, is forecast at a record 3.97 billion bushels, 425 million larger than the 2005 harvest. Production outside of the U.S. is forecast at a record 5.15 billion bushels, or 140 million tons (Table 11). Production of all oilseeds outside the U.S. is forecast at a record 292.1 million tons, 3 percent larger than last year's harvest. Declines in cottonseed and rapeseed are expected to partially offset increases in soybean and

sunflowerseed production.

U.S. export prospects are bolstered by expanding Chinese demand, but may be limited by increased competition from South American production. Exports near the record level of the 2004-05 marketing year are expected, with USDA forecasting shipments of 1.115 billion bushels. U.S. soybean exports are largest during the first half of the year. Excluding the short crop year of 2003-04, exports during the first half of the year averaged 72.3 percent of the marketing year total since 2000-01 (Table 1). As a result of this strong seasonal pattern, it is difficult to gauge the progress of exports relative to the marketing year projection on a weekly basis. Having said that, shipments got off to a very slow start in 2005-06, but picked up significantly during the week, ended October 13. Through the first 43 days of the marketing year, export inspections totaled 77.64 million bushels, compared to 99.18 million during the same period last year. In addition, unshipped export sales as of October 13 stood at only 220 million bushels, compared to 320 million on the same date last year. Last year, China started its buying and import program for U.S. soybeans much earlier than this year. Total export commitments to China now stand at 100 million bushels, compared to 150 million at this time last year. The pace of sales to China will be important, but it is too early to suggest that China will not buy the expected quantities of U.S. soybeans.

With exports of 1.115 billion bushels; crush of 1.695 billion; and seed, feed, and residual use of 160 million bushels, year ending stocks of U.S. soybeans are projected at 275 million bushels (Table 6).

Soybean Acreage to Increase

Early expectations for are for U.S. producers to increase soybean acreage in 2006. Reasons cited include the escalating costs of corn production, reduced concerns about Asian soybean rust, unexpectedly high yields of soybeans in 2005, and the higher price of soybeans delivered in the 2006-07 marketing year relative to prices of feed grains. The USDA's January report of winter wheat seedings will give some indication of how willing producers are to respond to changing economic conditions. In addition, indications of the extent of over-wintering of soybean rust will give a better indication of the potential risk of soybean rust in the midwest in 2006. The further south that freezing temperatures occur, the lower the perceived risk of rust. For now, we might expect soybean acreage to be near 73 million acres in 2006, with harvested area near 72 million. A trend yield near 42.5 bushels would result in a 2006 crop of 3.06 billion bushels. Changing cost and price conditions over the next 6 months will require a re-evaluation of acreage and production potential.

Price Prospects

November soybean futures declined by nearly $2.00 per bushel from the June high to the fall low as the U.S. crop turned out to be much larger than feared. However, prices rebounded a bit on the basis of a smaller September 1 stocks estimate and a smaller than expected October production forecast. November futures traded back to near $6.00 in mid-October. Cash prices reflect a generally weak basis in most markets. The average overnight cash bid is central Illinois reached a low of $5.15 on October 10, but recovered to about $5.45 on October 19. The average basis was $-0.43, much weaker than the basis of $-0.28 of last year and the five year average basis of $-0.21. In addition, the November-July spread in the futures market of $.30 was about $.08 larger than the spread of a year ago. The large crop, increased transportation costs, and storage limitations in some areas has resulted in an unusually large carry in the market.

The USDA projects that the 2005-06 marketing year average price will be in a range of $5.00 to $5.80. Historically, the average farm price was closely correlated to the level of year ending stocks expressed as a percentage of use (stocks-to-use ratio). For

the period 1989-90 through 1997-98 that relationship was: price = 14.96 ÷ (stocks-to-use) + 4.63 and the stocks-to-use ratio explained nearly 90 percent of the annual variation in the average farm price. That relationship changed and became much more volatile from 1998-99 through 2004-05. In general, prices during that period were much lower than the earlier period for a given stocks-to-use ratio. The best fit during that period was: price = 14.91 ÷ (stocks-to-use) + 3.38, but the stocks-to-use ratio explained only 55 percent of the annual variation in price.

For the past two years, the average farm price has been exactly half-way between the prices predicted by the two models. If that is the case again in 2005-06, the projected stocks-to-use ratio forecast here (9.3 percent) would result in an average farm price of $5.60.

At any given time, the futures market reflects the average price expected (or offered) for the remainder of the crop year. Those futures prices can be transformed into an expected farm price using a two-step process. First, for each month of the marketing year the appropriate futures contract price (nearest delivery not in the current month) is adjusted by the expected difference between the futures price and the average farm price received (reported by NASS) during that month. The USDA's Economic Research Service has calculated those average monthly differences since 1975-76. Those can be found at www.ers.usda.gov/Data/PriceForecast/Futmodsoybeans.xls. The average difference of the last five years is used as the expected difference for 2005-06. Second, the monthly estimate of average farm price is weighted by the expected percentage of the crop to be marketed each month. Again, the five year average is used as the expected marketing weights for 2005-06. Using this methodology with futures prices on October 19, along with the average cash price received in September, results in a forecast of average farm price of about $5.80. The average price offered by the market can be compared to the average price expected for the year to evaluate pricing opportunities.

There is some consistency in forecasts of the 2005-06 marketing year average price, with the stocks-to-use models projecting a price $.20 above the mid point of the USDA's forecast range and the market offering a price at the upper end of the range and $.40 above the mid point. The market is currently offering an opportunity to forward price some of the farm stored crop at levels well above the expected marketing year average price. The average premium for January delivery over immediate delivery in central Illinois was $.27 on October 19. A return to a more normal basis puts late spring prices about $.60 over spot bids. Considerable price uncertainty, however, will persist until well into the South American growing season.

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Table 1. Soybean Quarterly Balance Sheet

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
	million bushels																						
September 1 stocks	254.5	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0	178.3	112.4
Production	2,190.3	1,635.8	1,860.9	2,099.1	1,942.6	1,937.7	1,548.8	1,923.8	1,925.9	1,986.6	2,190.4	1,869.7	2,514.9	2,174.3	2,380.3	2,688.8	2,741.0	2,653.8	2,757.8	2,890.7	2,756.1	2,453.7	3,123.7
TOTAL	2,444.8	1,980.4	2,036.6	2,415.2	2,479.0	2,374.1	1,855.3	2,108.8	2,167.0	2,319.6	2,470.8	2,167.0	2,730.0	2,514.1	2,572.8	2,825.6	2,943.8	3,006.3	3,052.0	3,141.3	2,968.8	2,637.6	3,242.1
September-November																							
Crush	284.2	269.6	253.7	267.5	295.8	293.4	275.4	273.0	304.1	322.0	328.2	329.6	346.2	351.4	360.6	395.8	409.3	426.7	420.9	427.5	417.5	419.4	427.9
Export	245.9	190.6	153.4	166.5	216.5	260.8	138.3	168.5	120.1	167.1	235.9	176.0	230.9	233.6	289.7	365.3	268.5	297.8	315.5	348.6	320.4	385.7	406.5
Seed, residual	-36.2	48.5	14.8	21.5	10.1	64.6	74.8	56.6	58.8	51.5	70.7	79.8	50.9	95.7	97.4	66.9	78.5	98.9	75.6	89.6	112.3	140.5	103.1
TOTAL	493.9	508.7	421.9	455.4	522.4	618.8	488.5	498.1	483.0	540.6	634.8	585.4	628.0	681.7	747.7	826.2	758.8	823.4	812.0	865.7	850.2	945.6	937.5
December 1 stocks	1,950.9	1,471.7	1,614.7	1,959.8	1,956.6	1,755.3	1,366.8	1,610.7	1,684.0	1,779.0	1,836.0	1,573.6	2,102.0	1,833.4	1,825.1	1,999.4	2,186.4	2,182.7	2,240.0	2,275.6	2,115.4	1,688.7	2,304.6
Crush	314.9	262.5	276.4	281.9	320.1	317.3	286.3	304.3	301.4	323.1	335.2	327.2	371.8	359.0	400.7	443.1	408.6	408.1	417.9	447.6	422.0	423.2	436.2
Export	263.6	234.6	230.2	270.9	233.7	258.9	197.0	217.0	179.7	259.6	255.9	212.7	283.5	278.7	333.1	306.4	243.1	315.4	338.4	422.7	425.5	335.1	400.2
Seed, residual	26.6	18.8	47.0	35.7	63.8	33.0	-6.7	33.9	12.8	19.6	29.3	12.1	76.5	5.3	35.5	46.9	77.0	63.2	79.8	69.3	66.9	25.9	86.8
TOTAL	605.1	515.9	553.6	588.5	617.6	609.2	476.6	555.2	493.9	602.3	620.4	552.0	731.8	643.0	769.3	796.5	728.7	786.7	836.1	939.6	914.4	784.2	923.2
March 1 stocks	1,345.8	955.8	1,061.1	1,371.3	1,339.0	1,146.1	890.2	1,055.5	1,190.1	1,177.3	1,215.6	1,021.6	1,370.2	1,190.4	1,055.8	1,202.9	1,457.3	1,396.0	1,403.9	1,336.0	1,202.0	905.8	1,381.4
Crush	260.1	240.0	258.2	262.3	297.2	308.3	270.1	290.7	295.5	304.0	325.4	320.4	361.7	334.0	355.7	404.9	396.4	373.9	405.4	429.6	400.2	359.5	430.7
Export	216.2	204.2	153.4	226.4	159.3	185.0	135.5	153.2	146.9	148.2	186.7	120.6	216.6	188.5	165.9	120.0	161.9	205.8	220.8	155.0	194.4	117.6	211.2
Seed, residual	78.9	39.9	41.1	33.7	45.7	-2.5	20.1	15.7	24.2	29.4	20.1	25.3	0.0	44.9	34.3	84.4	50.4	58.9	69.5	66.5	6.3	19.1	40.2
TOTAL	555.2	484.1	452.7	522.4	502.2	490.8	425.7	459.6	466.6	481.6	532.2	466.3	578.3	567.4	555.9	609.2	608.7	621.8	695.7	651.1	600.9	496.2	682.1
June 1 stocks	790.6	471.7	608.4	848.9	836.8	655.3	464.5	595.9	723.5	695.7	683.4	555.3	791.9	622.8	499.9	593.7	848.6	774.4	708.2	684.9	602.4	410.6	699.3
Crush	248.8	210.6	242.1	241.1	265.5	255.5	225.8	278.4	285.9	304.6	290.0	298.4	325.5	324.9	318.7	353.2	375.4	370.1	395.8	395.0	375.6	327.6	401.8
Export	179.5	113.6	61.1	76.3	147.4	97.6	56.2	84.2	110.4	109.0	91.0	79.7	107.0	150.5	93.0	78.7	127.5	171.6	121.3	137.2	104.1	45.8	85.4
Seed, residual	17.7	-28.2	-10.9	-4.9	-12.5	0.3	0.5	-5.8	-1.8	3.1	10.1	-31.9	24.6	-35.2	-43.6	-37.9	-1.3	-55.0	-56.6	-55.3	-54.7	-74.0	-43.4
TOTAL	446.0	296.0	292.3	312.5	400.4	352.8	282.5	356.8	394.5	416.7	391.1	346.2	457.1	439.6	368.1	393.9	501.6	486.7	460.5	476.9	425.0	299.1	443.8
September 1 stocks	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0	178.3	112.4	255.5
Annual																							
Crush	1,108.0	982.7	1,030.4	1,052.8	1,178.7	1,174.5	1,057.6	1,146.4	1,186.9	1,253.7	1,278.8	1,275.6	1,405.2	1,369.4	1,435.7	1,595.1	1,589.7	1,578.8	1,650.0	1,699.7	1,615.3	1,529.7	1,696.6
Export	905.2	743.0	598.1	740.1	756.9	801.7	527.0	622.9	557.1	683.9	769.5	589.0	838.0	851.2	881.7	870.4	801.0	973.8	996.0	1,063.5	1,045.0	884.2	1,103.3
Seed, residual	87.0	79.0	92.0	85.9	107.0	95.4	88.7	100.4	94.0	103.6	130.2	85.3	152.0	110.4	123.6	160.3	204.6	166.2	168.3	170.1	130.2	111.5	186.7
TOTAL	2,100.2	1,804.7	1,720.5	1,878.8	2,042.6	2,071.6	1,673.3	1,869.7	1,838.0	2,041.2	2,178.5	1,949.9	2,397.0	2,330.9	2,441.0	2,625.8	2,595.3	2,718.8	2,803.1	2,933.3	2,790.5	2,525.5	2,986.6

Table 2. United States Soybean Production Estimates

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	million bushels																										
August 1	2,130	1,880	2,017	2,293	1,843	2,035	1,959	1,979	2,000	1,474	1,905	1,836	1,869	2,079	1,902	2,282	2,246	2,300	2,744	2,825	2,870	2,989	2,867	2,628	2,862	2,877	2,791
September 1	2,174	1,831	2,089	2,314	1,535	2,028	2,063	1,980	1,957	1,472	1,889	1,835	1,817	2,085	1,909	2,316	2,285	2,270	2,746	2,909	2,778	2,900	2,834	2,656	2,643	2,836	2,856
October 1	2,213	1,757	2,107	2,300	1,517	1,972	2,108	1,992	1,968	1,501	1,926	1,823	1,934	2,108	1,891	2,458	2,190	2,346	2,722	2,769	2,696	2,823	2,907	2,654	2,468	3,107	2,967
November 1	2,236	1,775	2,077	2,300	1,535	1,902	2,129	2,009	1,960	1,512	1,937	1,904	1,962	2,167	1,834	2,523	2,183	2,403	2,736	2,763	2,673	2,777	2,923	2,690	2,452	3,150	
January 1	2,268	1,817	2,030	2,277	1,595	1,861	2,099	2,007	1,905	1,539	1,927	1,922	1,986	2,197	1,809	2,558	2,152	2,382	2,727	2,757	2,643	2,770	2,891	2,730	2,418	3,141	
FINAL	2,261	1,798	1,989	2,190	1,636	1,861	2,099	1,943	1,938	1,549	1,924	1,926	1,987	2,190	1,870	2,515	2,174	2,380	2,689	2,741	2,654	2,758	2,891	2,756	2,454	3,124	

Table 3. Soybean Planting Intentions, Actual Plantings, and Acres Harvested

Year	January Intentions	Mar./April Intentions	June/July Intentions	Actual	Harvested Acreage
			million acres		
1975	57.5	56.6	54.6	54.6	53.8
1976	50.9	49.3	49.0	50.3	49.4
1977	53.1	55.7	59.0	59.0	57.6
1978	63.9	63.7	64.0	64.7	63.3
1979	66.3	68.8	71.6	71.4	70.3
1980	71.6	71.3	70.3	69.9	67.8
1981	----	69.8	68.5	67.5	66.2
1982	69.5[a]	---	72.2	70.9	69.4
1983	68.8[a]	65.8[b]	63.3	63.8	62.5
1984	65.2[a]	---	68.0	67.8	66.1
1985	64.4[a]	---	63.3	63.1	61.6
1986	---	62.0	61.8	60.4	58.3
1987	---	56.9	58.7	58.180	57.172
1988	---	58.0	58.5	58.840	57.373
1989	---	61.7	61.3	60.820	59.282
1990		59.42	58.05	57.795	56.283
1991	58.5	57.12	59.78	59.180	58.169
1992		57.42	59.03	59.180	58.233
1993		59.30	61.58	60.085	57.307
1994		61.12	61.78	61.620	60.809
1995		61.45	63.105	62.495	61.544
1996		62.478	63.895	64.195	63.349
1997		68.800	70.850	70.005	69.110
1998		72.000	72.720	72.025	70.441
1999		73.105	74.205	73.730	72.446
2000		74.871	74.501	74.266	72.408
2001		76.657	75.416	74.075	72.975
2002		72.966	72.993	73.963	72.497
2003		73.182	73.653	73.404	72.476
2004		75.411	74.809	75.208	73.958
2005		73.910	73.103	72.200	71.270

[a] February 1

[b] May 1

Table 4. Planted Acres of Soybeans by Region

	Western Corn Belt[a]		Eastern Corn Belt[b]		Mid-South[c]		Southeast[d]		East Coast[e]		United States	
Region	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%
1976	16,145	32.1	14,530	28.9	13,630	27.1	4,799	9.6	1,122	2.3	50,226	100.0
1979	23,370	32.7	19,620	27.5	18,470	25.9	8,360	11.7	1,591	2.2	71,411	100.0
1986	24,875	41.2	18,300	30.3	10,995	18.2	4,680	7.8	1,535	2.5	60,385	100.0
1987	24,120	41.5	18,580	31.9	10,330	17.8	3,675	6.3	1,475	2.5	58,180	100.0
1988	24,310	41.3	18,680	31.7	10,460	17.8	3,810	6.5	1,580	2.7	58,840	100.0
1989	24,790	40.8	19,020	31.3	10,750	17.7	4,460	7.3	1,800	2.9	60,820	100.0
1990	23,750	41.1	18,490	32.0	10,270	17.2	3,650	6.3	1,635	2.8	57,795	100.0
1991	26,035	44.0	19,420	32.8	8,990	15.2	3,005	5.1	1,730	2.9	59,180	100.0
1992	25,400	42.9	20,000	33.8	8,980	15.2	2,915	5.2	1,715	2.9	59,180	100.0
1993	25,300	42.1	20,410	34.0	9,690	16.1	2,915	4.9	1,770	2.9	60,085	100.0
1994	27,220	44.1	20,510	33.3	9,220	15.0	2,875	4.7	1,795	2.9	61,620	100.0
1995	28,210	45.1	21,130	33.8	9,130	14.7	2,290	3.6	1,735	2.8	62,495	100.0
1996	28,250	44.0	22,370	34.8	9,390	14.6	2,565	4.0	1,620	2.5	64,195	100.0
1997	32,450	46.4	22,610	32.3	10,390	14.8	2,777	4.0	1,778	2.5	70,005	100.0
1998	33,700	46.8	23,650	32.8	10,180	14.1	2,690	3.8	1,805	2.5	72,025	100.0
1999	35,800	48.5	24,100	32.7	9,700	13.2	2,360	3.2	1,770	2.4	73,730	100.0
2000	37,050	49.9	24,050	32.4	9,010	12.1	2,230	3.0	1,926	2.6	74,266	100.0
2001	37,700	50.9	24,650	33.3	7,685	10.4	2,135	2.9	1,905	2.5	74,075	100.0
2002	37,070	50.1	24,740	33.5	8,170	11.0	2,145	2.9	1,838	2.5	73,963	100.0
2003	37,650	51.3	23,770	32.4	7,990	10.9	2,253	3.0	1,741	2.4	73,404	100.0
2004	38,000	50.5	23,550	31.4	9,100	12.1	2,579	3.4	1,979	2.6	75,208	100.0
2005	36,500	50.6	23,010	31.9	8,480	11.7	2,271	3.1	1,939	2.7	72,200	100.0

[a] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

[b] Illinois, Indiana, Michigan, Ohio, Wisconsin

[c] Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas

[d] Alabama, Florida, Georgia, North Carolina, South Carolina

e Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia

Table 5. United States Soybean Yield Estimates

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	million bushels																										
August 1	30.3	27.4	30.2	32.3	29.7	30.5	31.5	32.9	34.7	26.0	32.3	32.5	31.8	35.8	33.8	37.6	36.4	36.3	39.5	39.5	39.2	40.7	38.7	36.5	39.4	39.1	38.7
September 1	30.9	27.0	31.2	32.6	24.9	30.3	33.2	33.1	34.0	25.9	32.0	32.4	31.0	35.9	34.0	38.2	37.0	35.8	39.3	40.6	37.9	39.5	38.2	37.0	36.4	38.5	39.6
October 1	31.5	26.0	31.5	32.4	24.7	29.5	33.9	33.3	34.2	26.4	32.6	32.3	33.0	36.3	33.7	40.5	35.5	37.0	39.0	38.7	37.0	38.7	39.2	37.0	34.0	42.0	41.6
November 1	31.8	26.5	31.0	32.4	25.0	28.5	34.2	33.8	34.1	26.6	32.8	33.7	33.5	37.3	32.7	41.5	35.4	37.9	39.2	38.6	36.7	38.0	39.4	37.5	33.8	42.6	
January 1	32.2	26.8	30.4	32.2	25.7	28.2	34.1	33.8	33.7	26.8	32.4	34.0	34.3	37.6	32.0	41.9	34.9	37.6	39.0	38.9	36.5	38.1	39.6	37.8	33.4	42.5	
FINAL	32.1	26.5	30.1	31.5	26.2	28.1	34.1	33.3	33.9	27.0	32.3	34.1	34.2	37.6	32.6	41.4	35.3	37.6	38.9	38.9	36.6	38.1	39.6	38.0	33.9	42.2	

Table 6. Soybean Balance Sheet -- Years Beginning September 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06[a]
	million bushels																
Carryin	182	239	329	278	292	209	335	183	132	200	348	290	248	208	178	112	256
Production	1,924	1,926	1,987	2,190	1,870	2,515	2,174	2,380	2,689	2,741	2,654	2,758	2,891	2,756	2,454	3,124	2,985
TOTAL[b]	2,109	2,167	2,320	2,470	2,168	2,729	2,514	2,573	2,826	2,944	3,006	3,052	3,141	2,969	2,638	3,242	3,245
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,578	1,640	1,700	1,615	1,530	1,696	1,695
Export	623	557	684	770	589	838	851	882	870	805	975	996	1,064	1,045	887	1,103	1,115
Seed, feed, residual	101	94	103	129	94	151	111	123	159	201	163	169	169	131	109	187	160
TOTAL	1,870	1,838	2,041	2,178	1,954	2,394	2,331	2,441	2,626	2,596	2,716	2,804	2,933	2,791	2,526	2,986	2,970
Carryout	239	329	278	292	209	335	183	132	200	348	290	248	208	178	112	256	275
U.S. Average price	$5.70	$5.75	$5.58	$5.60	$6.40	$5.48	$6.77	$7.35	$6.47	$4.93	$4.63	$4.54	$4.38	$5.53	$7.34	$5.74	$5.60

[a] Projected

[b] Includes imports

Table 7. Soybean Meal Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
	thousand tons																
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330	293	383	240	220	211	260
Production	27,719	28,325	29,831	30,364	30,514	33,270	32,527	34,210	38,176	37,792	37,591	39,385	40,292	38,213	36,325	40,634	40,383
TOTAL[a]	27,982	28,688	30,183	30,687	30,788	33,483	32,825	34,524	38,443	38,109	37,970	39,729	40,818	38,619	36,830	40,960	40,808
Domestic	22,291	22,934	23,007	24,251	25,283	26,542	26,611	27,320	28,895	30,657	30,345	31,643	33,070	32,379	31,449	33,400	34,000
Exports	5,319	5,469	6,946	6,232	5,356	6,717	6,002	6,994	9,330	7,122	7,332	7,703	7,508	6,019	5,170	7,300	6,550
TOTAL	27,610	28,403	29,953	30,483	30,639	33,260	32,613	34,314	38,225	37,779	37,677	39,346	40,578	38,399	36,619	40,700	40,550
Ending stocks	318	285	230	204	150	223	212	210	218	330	293	383	240	220	211	260	258
Price[b]	$186.48	$181.38	$189.21	$193.75	$192.86	$162.55	$235.92	$270.90	$185.28	$138.55	$167.70	$173.60	$167.73	$181.57	$256.05	$182.89	$175.00

[a] Includes imports

[b] Bulk, Decatur, Illinois 48%

Table 8. Soybean Oil Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
	million pounds																
Beginning stocks	1,715	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,489	1,076	1,571
Production	13,003	13,406	14,346	13,778	13,951	15,613	15,240	15,752	18,143	18,081	17,825	18,420	18,898	18,438	17,080	19,320	19,155
TOTAL[a]	14,740	14,728	16,132	16,027	15,574	16,733	16,472	17,821	19,723	19,546	19,427	20,488	21,711	20,843	18,875	20,421	20,791
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,056	16,320	16,833	17,089	16,864	17,500	17,900
Exports	1,353	779	1,647	1,419	1,529	2,680	992	2,037	3,079	2,372	1,376	1,401	2,519	2,263	936	1,350	1,300
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	18,027	17,432	17,721	19,353	19,352	17,800	18,850	19,200
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,491	1,076	1,571	1,591
Average Price[b]	22.3¢	21.0¢	19.1¢	21.4¢	27.1¢	27.6¢	24.75¢	22.5¢	25.8¢	19.9¢	15.6¢	14.2¢	16.5¢	22.0¢	30.0¢	23.0¢	24.0¢

[a] Includes imports

[b] Bulk, Decatur, Illinois

Table 9. Soybean Production by Country

Year	United States	Brazil[a]	Argentina[a]	Paraguay[a]	China	Other	World	All Foreign
				million bushels				
1970	1,127	76	2	3	254	165	1,627	500
1971	1,176	135	3	4	290	126	1,734	558
1972	1,283	184	10	4	320	66	1,867	584
1973	1,547	289	18	7	367	64	2,292	745
1974	1,215	363	18	8	349	54	2,007	792
1975	1,547	413	26	10	367	46	2,409	862
1976	1,288	460	51	14	242	128	2,183	895
1977	1,762	350	99	12	266	154	2,643	881
1978	1,870	557	136	20	278	167	2,847	977
1979	2,261	376	132	21	274	191	3,255	994
1980	1,798	558	129	22	292	176	2,975	1,177
1981	1,989	471	152	22	342	186	3,162	1,173
1982	2,190	542	154	19	332	200	3,437	1,247
1983	1,636	571	257	20	359	213	3,056	1,420
1984	1,861	672	248	35	356	248	3,421	1,561
1985	2,099	518	268	22	386	272	3,565	1,466
1986	1,943	636	257	35	427	303	3,601	1,658
1987	1,938	662	356	40	457	359	3,812	1,874
1988	1,549	852	235	60	428	387	3,506	1,957
1989	1,924	747	395	58	376	445	3,945	2,020
1990	1,926	579	423	48	404	446	3,826	1,900
1991	1,987	709	410	48	357	435	3,946	1,959
1992	2,188	827	417	64	378	434	4,308	2,120
1993	1,871	908	456	66	563	454	4,318	2,447
1994	2,517	952	459	81	588	460	5,057	2,540
1995	2,177	887	457	88	496	487	4,591	2,415
1996	2,380	1,003	412	102	486	474	4,857	2,477
1997	2,689	1,194	717	110	551	545	5,806	3,117
1998	2,741	1,150	735	112	557	577	5,872	3,131
1999	2,654	1,257	779	107	525	527	5,875	3,221
2000	2,758	1,433	1,021	129	566	525	6,432	3,674
2001	2,891	1,598	1,102	130	566	506	6,793	3,902
2002	2,756	1,911	1,304	165	607	500	7,243	4,487
2003	2,454	1,856	1,213	144	566	611	6,844	4,390
2004	3,124	1,874	1,433	140	661	607	7,839	4,715
2005	2,967	2,205	1,488	176	625	655	8,116	5,149

[a] Harvested in the spring of the following year.

Table 10. South American Soybean Area, Yield and, Production, 1988 to Date

	Brazil			Argentina			Paraguay		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
Year	mil. ha.	t/ha.	mil.t	mil. ha.	t/ha.	mil. t.	mil. ha.	t/ha.	mil. t.
1988-89	12.15	1.94	23.60	4.00	1.63	6.50	0.85	1.90	1.62
1989-90	11.55	1.76	20.34	4.95	2.17	10.75	0.98	1.61	1.58
1990-91	9.75	1.62	15.75	4.75	2.42	11.50	0.89	1.46	1.30
1991-92	9.70	1.99	19.30	4.80	2.32	11.15	0.90	1.44	1.30
1992-93	10.63	2.12	22.50	4.90	2.32	11.35	0.98	1.79	1.75
1993-94	11.44	2.16	24.70	5.40	2.30	12.40	1.05	1.71	1.80
1994-95	11.68	2.22	25.90	5.70	2.19	12.50	1.10	2.00	2.20
1995-96	10.95	2.21	24.15	5.98	2.08	12.43	1.10	2.18	2.40
1996-97	11.80	2.27	26.80	6.26	1.81	11.20	1.20	2.31	2.77
1997-98	13.00	2.50	32.50	6.95	2.80	19.50	1.20	2.49	2.99
1998-99	12.90	2.43	31.30	8.17	2.45	20.00	1.20	2.54	3.05
1999-00	13.60	2.51	34.20	8.58	2.47	21.20	1.15	2.52	2.90
2000-01	13.93	2.80	39.00	10.40	2.67	27.80	1.35	2.61	3.52
2001-02	16.35	2.66	43.50	11.40	2.63	30.00	1.45	2.45	3.55
2002-03	18.45	2.82	52.00	12.60	2.82	35.50	1.55	2.90	4.50
2003-04	21.52	2.35	50.50	14.00	2.36	33.00	1.75	2.23	3.91
2004-05	22.84	2.23	51.00	14.40	2.71	39.00	2.00	1.90	3.80
2005-06	22.00	2.73	60.00	15.20	2.66	40.50	2.00	2.40	4.80

Source: USDA, FAS

Table 11. World Oilseed and Soybean Production

	Major Oilseeds			Soybeans		
Year	United States	Ex-United Stated	Total	United States	Ex-United States	Total
			million metric tons			
1977-78	56.5	93.7	150.2	47.95	23.98	71.93
1978-79	58.6	92.0	150.6	50.86	26.62	77.48
1979-80	72.4	98.1	170.5	61.72	31.79	93.51
1980-81	55.8	99.8	155.6	48.77	32.20	80.97
1981-82	64.0	105.5	169.5	54.13	31.93	86.06
1982-83	68.2	110.1	178.3	59.61	33.96	93.57
1983-84	50.4	115.1	165.5	44.52	38.64	84.16
1984-85	59.2	131.7	191.1	50.64	42.50	93.14
1985-86	65.4	130.8	196.2	57.13	39.92	97.05
1986-87	59.4	135.0	194.4	52.87	45.21	98.08
1987-88	60.6	150.0	210.6	52.75	51.06	103.81
1988-89	50.3	153.9	204.2	42.15	53.49	95.64
1989-90	59.3	153.1	212.4	52.35	55.02	107.37
1990-91	60.6	155.1	215.7	52.42	51.57	103.99
1991-92	64.3	160.0	224.3	54.07	53.31	107.38
1992-93	68.4	158.9	227.4	59.61	57.69	117.30
1993-94	59.5	168.4	227.9	50.92	66.58	117.50
1994-95	79.7	181.2	260.9	68.49	69.14	137.63
1995-96	69.1	190.6	259.7	59.24	65.72	124.96
1996-97	74.8	187.0	261.8	64.78	67.40	132.18
1997-98	83.1	203.9	287.0	73.18	84.90	158.07
1998-99	84.4	210.3	294.7	74.60	85.21	159.81
1999-00	82.3	221.1	303.4	72.22	87.68	159.90
2000-01	84.9	228.5	313.4	75.06	100.00	175.06
2001-02	89.8	235.3	325.1	78.67	106.20	184.87
2002-03	83.9	245.7	329.6	75.01	122.11	197.12
2003-04	76.6	257.9	334.5	66.78	119.48	186.26
2004-05	96	283.2	379.2	85.01	128.33	213.35
2005-06	92.8	292.1	384.9	80.75	140.12	220.87

[1]WASDE October 2005 and earlier.